

Impact Assessments for Air Quality



June 2, 2006
Advisory Committee
Sacramento, California

Impact Assessments for Air Quality

- ◆ **Existing setting**
- ◆ **Development of alternatives (e.g., AQM)**
- ◆ **Environmental consequences**
 - **Significance criteria**
 - ❖ Quantitative (emissions thresholds)
 - ❖ Qualitative (e.g., odors)
 - **Analysis methodologies (screening level analysis)**
 - **Emissions estimation**
 - ❖ Assumptions and limitations
 - **Comparison to significance criteria**
 - **Comparison of alternatives**

Significance Criteria for Air Quality Impact Analysis

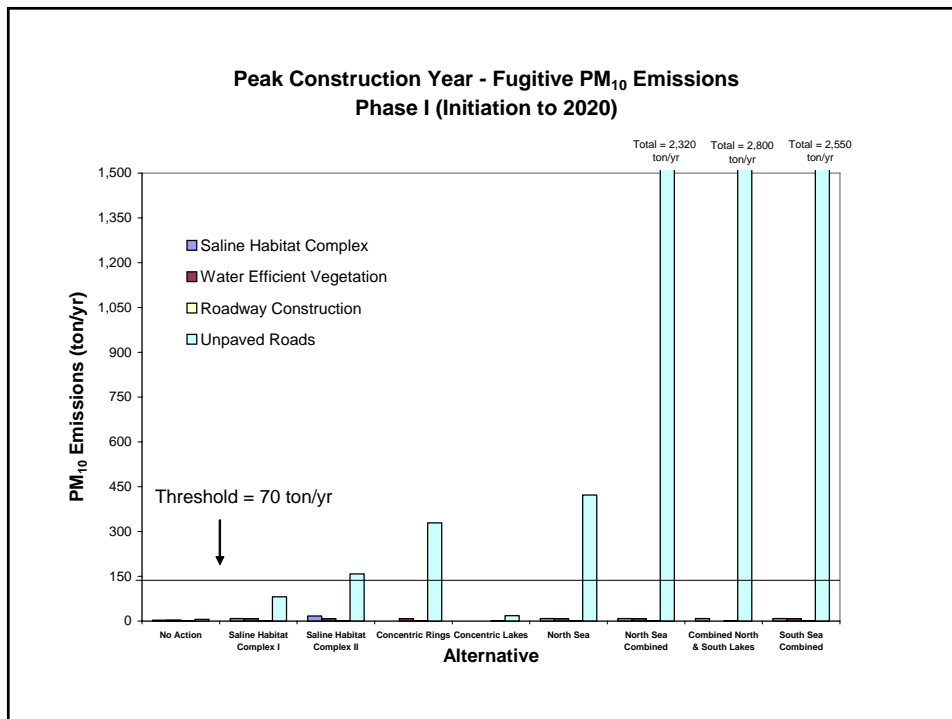
- ◆ **Construction emissions**
 - Fugitive dust (PM₁₀)
 - Exhaust (NO_x, diesel PM₁₀)
- ◆ **Operations and maintenance emissions**
- ◆ **Exposed playa areas**
 - Fugitive dust (PM₁₀, HAPs)
- ◆ **General conformity applicability**
- ◆ **Odors**
- ◆ **Microclimate**

Analysis Methodologies

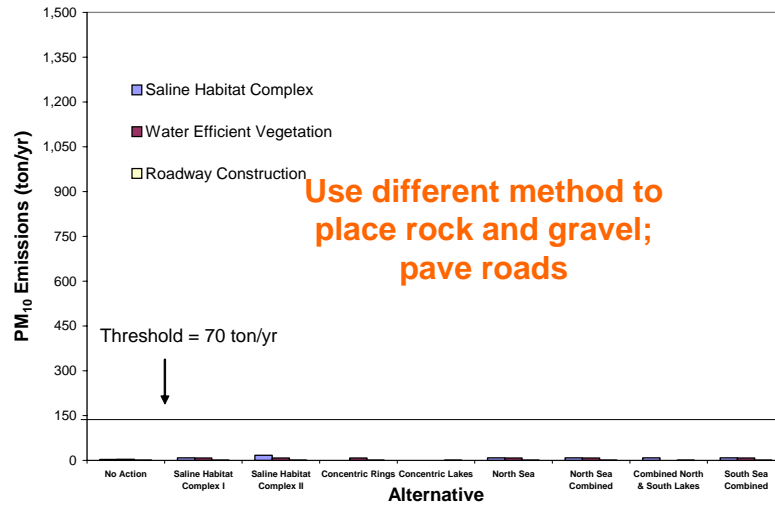
- ◆ **Construction emissions**
 - Material quantities and acreages for the main components
 - Emission factors
- ◆ **Operations and maintenance emissions**
 - Percent of Peak Construction Year emissions estimates
- ◆ **Exposed playa areas**
 - Preliminary PI-SWERL data collected at the Salton Sea, threshold wind speeds, wind data, seasonality
- ◆ **General conformity applicability**
- ◆ **Odors**
- ◆ **Microclimate**

Impact Analysis for Emissions from Construction

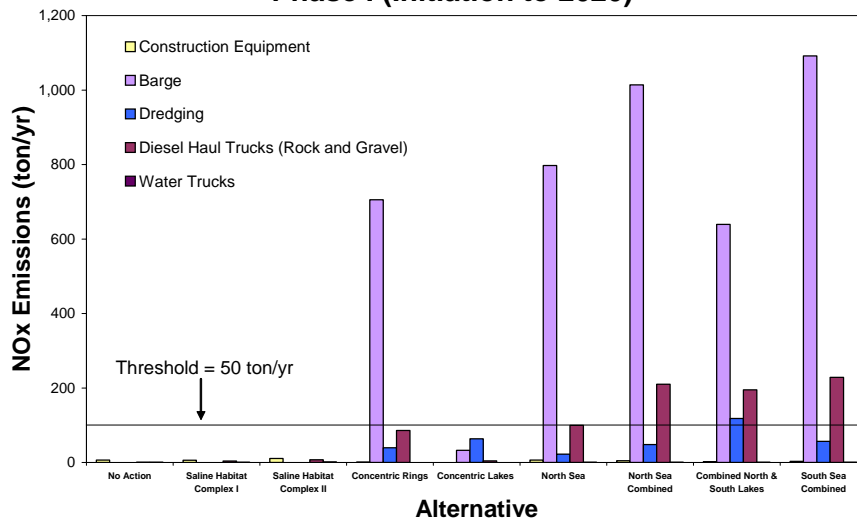
- ◆ **Construction emissions**
 - Fugitive dust (PM₁₀, HAPs)
 - Exhaust (NOx, diesel PM₁₀)
- ◆ **Emissions estimation methodology**
 - Material quantities and acreages for the main components
 - Emissions factors
- ◆ **Assumptions and limitations**
- ◆ **Primary contributors to predicted emissions**
 - Fugitive dust – unpaved roads
 - NOx – barges
 - Diesel PM₁₀ – barges
- ◆ **Results (presented in bar chart for comparative purposes)**

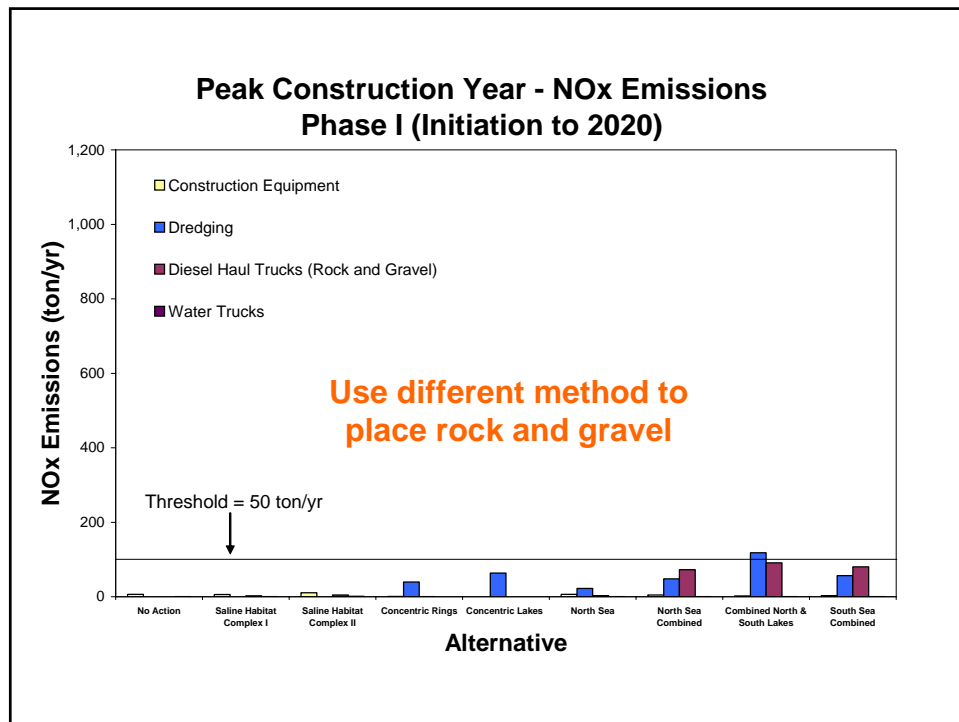


Peak Construction Year - Fugitive PM₁₀ Emissions Phase I (Initiation to 2020)



Peak Construction Year - NO_x Emissions Phase I (Initiation to 2020)





Impact Analysis for Emissions from Exposed Playa Areas

◆ Emissions estimation methodology

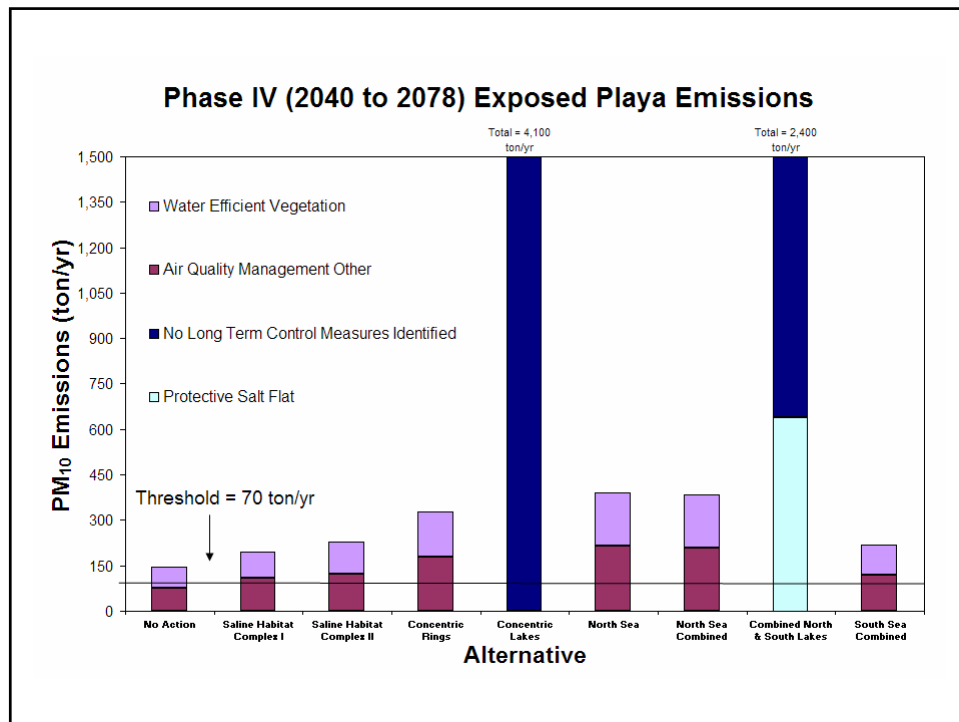
- Emissions without control
- Emissions after implementation of AQM

◆ Assumptions and limitations

◆ Primary contributors to predicted emissions

- Size of exposed areas
- Level of control proposed
- Measured wind speeds
- Seasonal changes in playa stability and emissivity

◆ Results (presented in bar chart for comparative purposes)



Impact Analysis for General Conformity Applicability

- ◆ **Sum of Phase I construction and operation emissions compared to No Action Alternative**
- ◆ **Phase IV operation emissions compared to No Action Alternative**
- ◆ **Comparison of net increases in emissions to de minimis thresholds**
 - **Thresholds exceeded, formal determination needed**
- ◆ **Comparison of net emissions to regional inventory**
 - **Not regionally significant**
- ◆ **Results (bar charts)**

